Institute and Faculty of Actuaries, Regulatory Board

Subject	Regulatory actions arising from AMS Data Science review findings
Meeting date	14 February 2024
Previous Steer/Approval	**February 2021** - Ethical and professional guidance for members
	September 2022- Approval of Data Science as thematic review topic
	July 2023 - Deep dive and approval of AI Risk Alert
Related horizon scan code	**HS02** - Complex modelling
International issues considered?	Yes
Author	Hannah MacLeod, Interim Head of Legal Services
Reviewer	Alan Marshall, Review Actuary
Purpose	Steer

A: Executive summary

1. This paper seeks a steer from the Regulatory Board (the Board) on potential regulatory steps it might take following the findings of the Actuarial Monitoring Scheme (AMS) Thematic Review report on the work of actuaries in data science and Artificial Intelligence (AI).

2. The paper provides some background information, a summary of the review findings and some potential follow up actions for the Board to consider.

B: Background

3. The Board approved data science as part of a shortlist of review topics presented to it in October 2020. It has since considered the work of actuaries in data science and AI at various times, including the consideration and approval of non-mandatory ethical guidance in 2021, and the issuing of a Risk Alert in July 2023. The Board's Horizon Scan Register contains an entry relating to the use of complex models – the use of data science is an example of this risk.

Professional regulation of actuaries in this area

4. As discussed by the Board at its meeting in July 2023, there is various regulatory activity ongoing in relation to the use of data science. In particular:

- The IFoA provided a response to a joint discussion paper issued jointly by the PRA and the FCA, DP5/22, in October 2022, focused on AI and ML. The feedback paper was published in October 2023;
- The UK government Department for Science, Innovation and Technology, issued a White Paper in March 2023 "A pro-innovation approach to AI regulation".
- In October 2023 the FRC published research carried out by the Government Actuary's Department examining the use of AI and Machine Learning in UK actuarial work; and

- The FRC has updated TAS100 and produced associated guidance on models, relevant to the use of complex data science techniques.

5. The Actuaries' Code and APS X2 (Work review) are both relevant to Member's professional and ethical obligations in relation to the use of data science and AI, and as mentioned above, in 2021 the Board approved the publication of non-mandatory guidance to help members understand how their professional and regulatory obligations relate to work that they undertake in data science.

6. In addition, the IFoA supports various research groups who continue to contribute actively to the growing body of research and discussion on this topic.

AMS Report findings

7. The draft AMS Data Science Review report has been shared separately with the Board for approval. The report makes a number of findings and observations that aim to help support actuaries in the safe, transparent and inclusive use of data science and AI technology.

8. The report provides an outline of the extent of actuarial activity in data science and AI and considers the scope of developing standards in this area.

9. The report includes the following findings and observations:

   a. The use and regulation of data science and AI is rapidly evolving, and this includes the use of emerging technologies in an actuarial context. These developments are leading to the alteration of existing risks and the creation of new risks.

   b. Actuaries are becoming increasingly involved in the use of data science, both in the development of AI technologies, and in the use of AI in traditional actuarial work.

   c. The IFoA provides existing support to Members through non-mandatory guidance, the qualification curriculum and lifelong learning opportunities.

   d. The IFoA continues to contribute to a broad range of collaborative research and discussion pieces in this field which aim to influence the safe development of AI activity.

   A paper setting out the range of options available to the Board in terms of possible responses to findings is included at **Appendix 1**.

C: Potential further steps

10. The Board is asked to consider how it might support the continued progression of opportunities for IFoA Members in the field of data science, and whether any current regulatory activity should be undertaken to address the public interest risks.

11. The table below sets out a number of proposed recommended steps:

	Potential next steps	Indicative timings
1.	Supportive statement by the Board to accompany the Data Science report, endorsing its findings, drawing out the conclusions and setting out the actions being taken by the Board in response.	In line with publication of the report.
2.	Review non-mandatory guidance on Data Science in light of review findings, to ensure the content is up to date and reflective of recent developments. Consider engagement of relevant Working Group to provide support.	To start upon publication of AMS report.
3.	Share review feedback with Professional Skills Working Group to help support existing work in this area.	Upon publication of AMS report.
4.	Discuss review feedback with the IFoA's education and lifelong learning team to support their consideration of ways to develop relevant competencies within the overall learning offering.	Upon publication of AMS report.
5.	Share review feedback with FRC to reinforce findings and key messages.	Upon publication of AMS report.
6.	Ensure report and accompanying Board statement, are communicated to members through appropriate channels, e.g. via a regulatory webinar, news articles/blogs, the Digital Communities and newsletters.	In line with publication of AMS report – communications plan already in place. Webinar planned for 19 March.

D: Conclusion

12. The Board is asked to provide a steer on the proposed further steps and provide suggestions for any additional actions.

E: Appendices

Appendix 1 – Extract from paper on AMS Thematic Review Programme.